

REMARKS

This amendment is filed in response to the Office Action dated June 6, 2003. This application should be allowed and the case passed to issue.

No new matter is introduced by this amendment. The amendments to the specification at pages 5 and 7, claim 4, and the abstract are supported by the foreign priority document, FI 990334, which has been incorporated by reference in the present application. The amendment to claim 1, is supported by the specification at page 1, lines 5-12; page 2, lines 1-6; and claim 3 as originally filed. The amendment to claims 2, 5, and 6 are merely made so that the claims conform to U.S. Patent practice.

Claims 1, 2, and 4-6 are pending in this application. Claim 3 has been canceled. Claims 4-6 are objected to. Claims 1 and 2 are rejected.

Initially, Applicants submit that the term "slub" as used on page 5, line 22; page 7, line 21; line 10 of the abstract; and claim 4, should properly be "batt fibre". There was a mistranslation when the foreign priority document (FI 990334) was translated from Finnish into English. A declaration and certified translation of the pertinent portions of the Finnish priority document are being prepared and will be provided in separate papers. The foreign priority document has been incorporated by reference into the instant application. Therefore, no new matter is introduced by changing "slub" to "batt fibre".

Applicants thank Examiner Guarriello for the courtesy of explaining the procedure for correcting a mistranslation, during a telephone interview on August 29, 2003.

Claim Objections

Claims 4-6 are objected to under 37 C.F.R. § 1.75(c) as being in improper form. This objection is traversed, and reconsideration and withdrawal thereof respectfully

requested. Claims 4-6 have been amended to eliminate improper multiple claim dependencies. Applicants submit that claims 4-6 fully comport with the requirements of 37 C.F.R. § 1.75(c) and should be examined on the merits.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-3 are rejected under 35 U.S.C. § 103 as being unpatentable over Simpson (U.S. Patent No. 4,726,978). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the invention and the cited prior art.

An aspect of the invention, per claim 1, is a solid-liquid filtration filter cloth which is intended for use in a pressure filter based on diaphragm extrusion which comprises at least two filter chambers. The filter cloth is guided through the filter chambers arranged one after the other in the direction of movement of the filter cloth so that in the filter chambers the opposite sides of the filter cloth are alternately against the slurry to be filtered. The slurry contains liquid and solids. The filter cloth is symmetrical in respect of the filtering ability. The filter cloth comprises a middle layer. Both surfaces of the middle layer are provided with protective layers which form the outer surfaces of the filter cloth and are denser than the middle layer. The middle layer has a woven structure withstanding tensile stress thus allowing the solids separated from the slurry in the filter to be conveyed out of the filter chambers by means of the filter cloth.

The Examiner asserts that Simpson describes a layer of non-woven, open woven, or open knitted charcoal cloth, which corresponds to the claimed filter cloth. The Examiner further asserts that Simpson describes a multilayer composite that can be used for filter materials. The Examiner notes that Simpson is silent about whether the outer layers are

denser than the middle layer, the wear resistance, and the woven structure of the middle layer. The Examiner, however, concludes that it would have been obvious to modify the layers of Simpson to have the claimed density because Simpson discloses that the textile material may fit the use of the article dependent upon the properties so desired. The Examiner considers the optimizing of the density of the layers would be within one of ordinary skill in the art. The Examiner continues that one of ordinary skill in this art would have been motivated to modify the fibers or threads because Simpson teaches that open woven fibers could be used. In addition, the Examiner believes the nylon filaments taught by Simpson would provide wear resistance.

Simpson, however, does not suggest the claimed filter cloth. Simpson discloses a multilayer structure for clothing and molded articles, such as face masks. Simpson does not mention any industrial uses of the multilayer fabric, such as solid-liquid separation.

Simpson only discloses that the fabric could be used as filter material in bandages or other medical dressings. The charcoal cloth middle layer of Simpson cannot be used as a filtering cloth for solid-liquid separation because it is too fragile (specification at column 2, line 21). The fabric of Simpson would be damaged if used in an industrial use, such as solid-liquid filtration process. Furthermore, Simpson teaches that extensibility is an important feature of the fabric (column 3, lines 38-41). As one of ordinary skill in this art would recognize, it would be impossible to use extensible clothing in industrial solid-liquid filtration.

Moreover, Simpson does not teach forming a symmetrical structure in respect of the filtering ability, as required by claim 1. On the contrary, Simpson teaches that the fabric structure comprises layers having different properties (column 4, lines 10-15 and column 5, lines 28-33).

Furthermore, Simpson discloses that an important form of the fabric is liquid-impermeable (column 5, lines 7-23). Thus, the fabric of Simpson is wholly unsuitable for solid-liquid filtration, and therefore, is not a solid-liquid filtration filter cloth, as required by claim 1.

As acknowledged by the Examiner, Simpson is silent about the outer layers being denser than the middle layer. On the contrary, Simpson teaches protective clothing having high air permeability (column 3, lines 24-31). Thus, there is no motivation to increase the density of clothing using denser outer layers.

The Examiner also admits that Simpson is silent about the middle structure being a woven structure. Simpson discloses an open woven structure having high air permeability. However, an open structure would not provide the necessary tensile strength for the Simpson fabric to function as a conveyor belt for conveying filtered solids after the filtration step.

As regards claim 2, the Examiner acknowledges that Simpson is silent about using wear resistant threads or fibers and a wear resistant bond structure in the outer layers. The Examiner notes that Simpson teaches calendering the fabric to effect point-sealing of the fusible fibers whereby a local strengthening flexibility may be provided. Simpson, however, is silent about wear resistance. Strength ("the quality or state of being strong") and wear ("damage or deterioration sustained from continuous use") are not the same.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily available to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d

1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no suggestion in Simpson to modify the fabric so that it can be used as a solid-liquid filtration filter cloth, be symmetrical in respect of the filtering ability, comprise outer layers which are denser than the middle layer, and have a middle layer with a woven structure withstanding tensile stress to allow the solids separated from slurry to be conveyed out of the filter chamber, as required by claim 1.

The requisite motivation to support the ultimate legal conclusion of obviousness under 35 U.S.C. § 103 is not an abstract concept, but must stem from the applied prior art as a whole and realistically impel one having ordinary skill in the art to modify a specific reference in a specific manner to arrive at a specifically claimed invention. *In re Deuel*, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995); *In re Newell*, 891 F.2d 899, 13 USPQ2d 1248 (Fed. Cir. 1989). Accordingly, the Examiner is charged with the initial burden of identifying a source in the applied prior art for the requisite realistic motivation. *Smiths Industries Medical System v. Vital Signs, Inc.*, 183 F.3d 1347, 51 USPQ2d 1415 (Fed. Cir. 1999); *In re Mayne*, 104 F.3d 1339, 41 USPQ2d 1449 (Fed. Cir. 1997). There is no motivation in Simpson to modify the fabric so that it can be used as a solid-liquid filtration filter cloth, be symmetrical in respect of the filtering ability, comprise outer layers which are denser than the middle layer, and have a middle layer with a woven structure withstanding tensile stress to allow the solids separated from slurry to be conveyed out of the filter chamber, as required by claim 1.

The only teaching of the claimed solid-liquid filtration filter cloth is found in Applicant's disclosure. However, the teaching or suggestion to make a claimed combination

and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The motivation for modifying the prior art must come from the prior art and must be based on facts.

The dependent claims further distinguish the claimed invention. For example, claim 4 further requires that the protective layers are batt fibre layers. Claim 6 further requires that the air permeance of the filter cloth is below $0.2 \text{ m}^3/\text{m}^2 \text{ min}$, 200 Pa. The cited prior art does not suggest the claimed filter cloth with these additional limitations.

In light of the Amendments and Remarks above, this application should be considered in condition for allowance. If there are any question regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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